



EAST-WEST PASSENGER RAIL STUDY

January 11, 2020

East-West Rail Study Overview

- The East-West Passenger Rail Study:
 - Identifies transportation corridors that provide new passenger rail connections between Pittsfield, Springfield, Worcester, Boston, and intermediate communities
 - Assesses the geographic, infrastructure, and demographic conditions in the East – West rail corridor
 - Evaluates potential improvement alternatives for enhancing passenger rail connections among the Corridor communities.
 - Summarizes the projected benefits, costs, impacts, and trade-offs of the improvement alternatives
- Fast and frequent passenger rail service in the East-West Rail Corridor could enhance mobility and connectivity for Corridor communities, provide residents and stakeholders with additional travel options, and catalyze new economic opportunities, such as development around stations. Improved connectivity among job centers and better mobility for potential workers could increase employment opportunities for workers and expand the talent pool available to employers by better linking the western, central, and eastern regions of the Commonwealth with each other and with a broader travel market.

The East – West Passenger Rail Study is intended to answer the central question:

How can we connect people in western Massachusetts with central and eastern Massachusetts using a passenger rail service that provides fast, frequent, attractive service in a cost-effective and achievable manner?

Final Alternatives Analysis

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Final Alternatives Analysis

- Based on the results of the Preliminary Alternatives analysis and feedback from the Advisory Committee, stakeholders, and members of the public, the alternatives were narrowed to a set of three Final Alternatives that all include the following preferred characteristics:
 - Rail operations for the full East – West Corridor, from Pittsfield to Boston, via the Boston – Albany railroad mainline
 - Service to all stations in the Corridor, including in smaller intermediate communities: Pittsfield, Chester, Springfield, Palmer, Worcester, Lansdowne, Back Bay, and South Station
 - Passenger rail service in the existing rail corridor; the cost of building a new railroad line in the I-90 corridor (in Alternative 6) was judged to be not worth the incremental travel time savings
- Each alternative offers a set of positive (Pro) and negative (Con) attributes that must be considered to make an informed decision on the overall benefits provided by the alternative.
- MassDOT acknowledges the preference of several Advisory Committee members to prioritize the 4/5 hybrid alternative, but at this stage MassDOT recommends keeping Alternatives 3 and 4 under consideration, as additional information may be worth considering before the focus is narrowed to one alternative. Moreover, the necessary next steps do not require the selection of one alternative.

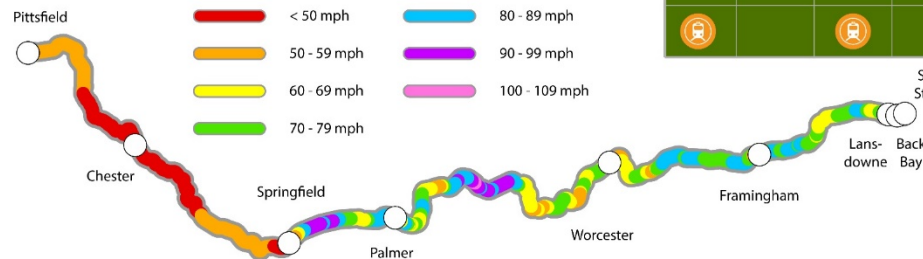




Alternative 4: Passenger Rail between
Pittsfield and Boston with
New Track in Existing Alignment

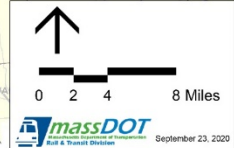
- Rail Service with No Transfer
- Existing Single-Track Segments
- Existing Double-Track Segments
- New Double-Track in Existing Alignment
- New Separate Track Next to Existing Alignment
- Rail Station
- Rail Service with Transfer
- Other Improvements

ANTICIPATED SCHEDULED SPEEDS



PIT	LEE	CST	BLD	SPG	PLM	WOR	FRA	LND	BBY	BOS

GFD
HFD
NHV





Key Findings

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Key Findings

- Ridership forecasts range from 922 to 1,554 daily boardings (278K to 469K annual boardings)
- Conceptual capital costs range from \$2.4 to \$4.6 billion.
- Interaction between passenger and freight trains is higher in the Pittsfield to Springfield segment
 - Due to sharing the double-track, higher level of freight volumes west of Springfield, and lower speeds because of steep grades
- Differences in improvements, costs, and travel time are all attributable to the Springfield–Worcester segment
- All alternatives score poorly using current federal Benefit Cost Analysis methodology

Key Findings (continued)

- A reduction in travel times by as much as one hour over currently feasible times could be possible with new investment in the rail infrastructure between Pittsfield and Boston.
- Commuter, business, and recreational travel markets are present to varying degrees along the corridor. *The study did not examine the possible long-term impacts of the COVID-19 pandemic on travel patterns or demographics.*
- Passenger rail and CSX operations within an enhanced shared-track environment would require careful coordination of services and clear operational criteria, as well as an agreement with CSX as owner of the line west of Worcester
- Passenger rail service operated between Springfield and Worcester over an independent alignment adjacent to CSX track(s) appears to be feasible, could eliminate most of the interference between the two types of operations (passenger and freight) in this segment, and could reduce travel time in the segment by 10 minutes. However, building this independent alignment to adhere to CSX requirements for passenger service on their right-of-way adds significant cost and complexity. *The estimated capital cost of complying with CSX design criteria is approximately \$1.5 billion.* Additional alignment improvements that are expected to save an additional 10 minutes are projected to cost \$765.4 million.

Next Steps and Recommendations

East-West Rail

Overview of Next Steps and Recommendations

- There is additional work to be done to fully complete the conceptual planning stage for East-West Rail service. This work includes discussions with CSX about its requirement for complete separation of the passenger operations from its own tracks, the development of a governance structure for passenger rail outside the MBTA service area, and a more detailed study of economic and community benefits and impacts. These tasks and others could advance opportunities for turning East-West Passenger Rail from a subject of study to a project that can be designed, permitted, funded, built, and operated.
- The East – West Passenger Rail Study is a substantial step forward in realizing the potential for enhanced service within the corridor. The following four areas have been identified as next steps to continue advancing the conceptual planning phase for East-West Passenger Rail:
 - Further Discussion of CSX Requirements
 - Detailed Study of Economic and Community Benefits and Impacts
 - Understand Governance Options for Expanded Passenger Rail in Western Massachusetts
 - Evaluation of Funding Sources and Strategies

Further Discussion of CSX Requirements

Additional capital cost for complying with CSX design criteria is approximately \$1.5 billion. Therefore, MassDOT will:

- Continue discussions with CSX to ascertain the basis for their policies related to shared operations with passenger service.
- Seek to conduct a life-cycle cost analysis, if possible, to determine the full spectrum of costs associated with greater control of the ROW.
- Ask for CSX cooperation in rail capacity modeling and ROW condition analyses.
- Discuss if there are opportunities with phasing or a pilot service in some segments.

Detailed Study of Economic and Community Benefits and Impacts

Study issues not captured in a standard transportation analysis:

- Explore long-term demographic and growth patterns to understand potential transformative impacts of East-West passenger rail by investigating current and prospective factors affecting regional growth.
 - Include literature review and case studies of similar projects elsewhere
 - Focus on what economic and demographic results were achieved and what other changes—apart from new rail service—were significant contributors to the results.
 - If funded, would look for significant participations by regional planning agencies and businesses.
- MassDOT will be evaluating how travel patterns and congestion may change and continue to change due to the pandemic across the state and across all transportation modes.

Understand Governance Options for Expanded Passenger Rail in Western Massachusetts

A new public governance structure would be needed for any of the three Final Alternatives as well as any other non-pilot, permanent passenger rail services in western MA. MassDOT will:

- Convene key elected stakeholders to discuss legal and policy implications of different governance structures.
- Work with these stakeholders to develop a white paper to identify options for a governance structure outside the MBTA service district.
- White paper could form the basis of a legislative proposal

Collaboration with legislators will ensure policy goals are met and there is a viable mechanism to address governance for passenger rail in the Commonwealth.

Evaluation of Funding Sources and Strategies

MassDOT will:

- Coordinate efforts with state and federal elected officials to evaluate potential funding sources. Project phasing can also be evaluated in context with funding opportunities.
- Work with the Congressional delegation and other key stakeholders to advocate for changes to the federal cost-benefit analysis used by the Federal Railroad Administration. Because the federal cost-benefit methodology considers a limited range of benefits, the Commonwealth likely would not qualify for federal funding.
- Catalog existing and potential federal funding sources, an effort that will depend in part on findings from the governance white paper.